



US009671784B1

(12) **United States Patent**
Dolgov et al.

(10) **Patent No.:** **US 9,671,784 B1**
(45) **Date of Patent:** ***Jun. 6, 2017**

(54) **DETECTING AND RESPONDING TO
TAILGATERS**

USPC 701/1, 93, 96, 301, 451; 340/435, 436,
340/467, 901, 903, 933, 426.16, 427;
180/167; 455/500

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See application file for complete search history.

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-
claimer.

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(21) Appl. No.: **15/016,539**

(22) Filed: **Feb. 5, 2016**

Related U.S. Application Data

(63) Continuation of application No. 14/703,053, filed on
May 4, 2015, now Pat. No. 9,290,181, which is a
(Continued)

(51) **Int. Cl.**
G06F 19/00 (2011.01)
G05D 1/02 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **G05D 1/021** (2013.01); **B60W 30/16**
(2013.01); **B62D 15/0255** (2013.01); **B60W**
2550/30 (2013.01)

(58) **Field of Classification Search**
CPC .. G08G 1/19; G08G 1/142; G08G 9/02; H04J
3/00; H04L 12/413; B60Q 2300/43;
B60R 16/00; B60W 16/00; B60K
31/0058

(57) **ABSTRACT**

An autonomous vehicle detects a tailgating vehicle and uses various response mechanisms. A vehicle is identified as a tailgater based on whether its characteristics meet a variable threshold. When the autonomous vehicle is traveling at slower speeds, the threshold is defined in distance. When the autonomous vehicle is traveling at faster speeds, the threshold is defined in time. The autonomous vehicle responds to the tailgater by modifying its driving behavior. In one example, the autonomous vehicle adjusts a headway buffer (defined in time) from another vehicle in front of the autonomous vehicle. In this regard, if the tailgater is T seconds too close to the autonomous vehicle, the autonomous vehicle increases the headway buffer to the vehicle in front of it by some amount relative to T.

20 Claims, 8 Drawing Sheets

